

Notice of Allowability

Application No.

10/008,585

Examiner

Matthew C. Sams

Applicant(s)

KURK ET AL.

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/18/2006.
2. ☒ The allowed claim(s) is/are 5-29 and 31.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Response to Amendment

1. The Art Unit location of your application in the USPTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Art Unit 2617.
2. This office action is in response to the amendment filed on 9/18/2006.

Allowable Subject Matter

3. Claims 5-29 and 31 are allowed.
4. The following is an examiner's statement of reasons for allowance:

Applicant's invention is drawn to modifying a transceiver integrated circuit that comprises:

a partial VCO, designed to accept input from frequency setting components external to the transceiver IC;

a power amplifier;

a receiver;

and a controller interface;

the transceiver IC originally designed to work at and above 300 MHz, modified to function below 300 MHz by connecting a complete VCO (operating at a different frequency than the partial VCO) to the partial VCO and utilizing the partial VCO as an emitter follower circuit, a buffer, or a filter;

an external controller coupled to the controller interface;

a second power amplifier coupled to the output of the transceiver power amplifier;

a transmit/receive switch coupled to the second power amplifier and to the receiver input;

a direct digital frequency synthesizer; and

a loop filter coupled to the complete VCO and the transceiver IC.

Applicant's independent claims 5, 20 and 29 each recite, *inter alia*, a bimodal power data link transceiver device comprising a transceiver integrated circuit comprising a transmitter, a partial voltage controlled oscillator designed to accept at least one input from frequency setting components to produce a first clock signal at a first frequency set by the frequency setting components, a first power amplifier coupled to the partial VCO, a receiver, a second power amplifier coupled to the first power amplifier, a transmit/receive switch coupled to the second power amplifier and the receiver, a controller coupled to the transceiver IC, a direct digital frequency synthesizer having an output coupled to an input of the transceiver IC, a complete VCO coupled to the partial VCO, the complete VCO configured to produce a second clock signal at a second frequency and to couple the second clock signal to the partial VCO, the complete VCO further configured to utilize the partial VCO as one of an emitter follower circuit, a buffer, or a filter and a loop filter coupled to the complete VCO and the transceiver IC. Applicant's claims 5, 20 and 29 comprise a particular combination, which is neither taught nor suggested by the prior art.

Applicant's independent claim 10 recites, *inter alia*, a method for transceiving data in the radio frequency spectrum, the method comprising providing a transceiver integrated circuit (IC) having a partial voltage controlled oscillator designed to accept at least one input from frequency setting components external to the transceiver IC and in combination with the frequency setting components to produce a first clock signal at a first frequency set by the frequency setting components, an oscillator input port coupled to the partial VCO, a frequency reference port, a radio frequency input port, a radio frequency output port, a phase detector, using a complete VCO, generating a VCO signal for input to the oscillator input port, the VCO signal comprising a second clock signal at a second frequency, the complete VCO configured to utilize the partial VCO as one of an emitter follower circuit, a buffer, or a filter, coupling a direct digital synthesizer to the frequency reference port, coupling the radio frequency output port to a power amplifier and coupling the radio frequency input port to a transmit/receive switch. Applicant's claim 10 comprises a particular combination, which is neither taught nor suggested by the prior art.

5. Accordingly, Applicant's claims are allowed for these reasons and for the reasons recited by the Applicant in the Amendments filed on 7/11/2005, 2/13/2006 and 9/18/2006.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew C. Sams whose telephone number is (571)272-8099. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MCS
9/23/2006


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SUPERVISORY PRIMARY EXAMINER